



SECTION 1: Identification

1.1 Product Identifiers

Product Name : Guanidine Hydrochloride 6M Solution
 CAS # : 50-01-1
 EC # : 200-002-3
 Synonyms : Guanidine Monohydrochloride 6M Solution, Guanidinium Chloride 6M Solution, Guanidinium Hydrochloride 6M Solution.

1.2 Recommended Use of the Chemical and Restrictions of Use

Chemical manufacturing.

1.3 Supplier Details

Supplier : BioSpectra, Inc.
 100 Majestic Way
 Bangor, PA 18013
 T: 610.599.3400
ehs@biospectra.us

1.4 Emergency Numbers


Emergency Numbers : US & Canada: 1-800-424-9300
 : Outside the US & Canada: +1 703-527-3887

SECTION 2: Hazard Identification

2.1 Classification of Substance or Mixture GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4)
 Skin irritation (Category 2)
 Eye irritation (Category 2A)

2.2 GHS Label Elements Including Precautionary Statements

Pictogram : 

Signal Word : Warning

Hazard Statement(s) : H302 - Harmful if swallowed
 : H315 - Causes skin irritation
 : H319 - Causes serious eye irritation

Precautionary Statements : P264 - Wash skin thoroughly after handling
 : P270 - Do not eat, drink or smoke when using this product.
 : P280 - Wear protective gloves/eye protection/face protection.
 : P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
 : P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
 : P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 : P321 - Specific treatment (see supplemental first aid instructions on this SDS)

: P330 - Rinse Mouth.

- : P332+P313 - If skin irritation occurs: Get medical advice/ attention.
- : P337+P313 - If eye irritation persists: Get medical advice/attention.
- : P362 - Take off contaminated clothing and wash before reuse.
- : P501 - Dispose of contents/containers to an approved waste disposal plant.

2.3 Hazards not Classified or not Covered by the GHS

No Information Available

SECTION 3: Composition, Information on Ingredients

3.1 Substances

Product Name	: Guanidine Hydrochloride 6M Solution
Synonyms	: Guanidine Monohydrochloride 6M Solution, Guanidinium Chloride 6M Solution, Guanidinium Hydrochloride 6M Solution.
Formula	: $\text{NH}_2\text{C}(\text{NH})\text{NH}_2 \cdot \text{HCl}$
Molecular Weight	: 95.53 g/mol.
CAS#	: 50-01-1
EC#	: 200-002-3

Component	Concentration	Hazardous
Guanidine Hydrochloride	45-65%	Yes
Water	35-55%	No

SECTION 4: First Aid Measures

4.1 Description of Necessary First Aid Measures

Eyes	: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lift the upper and lower lids. Consult a physician.
Skin	: Immediately flush skin with plenty water for at least 15 minutes. Remove contaminated clothing and shoes. Consult a physician if irritation develops or persists.
Ingestion	: Do not induce vomiting. Never give anything by mouth to an unconscious person. If person is awake, rinse mouth out with water. Consult a physician.
Inhalation	: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.

4.2 Most Important Symptoms/Effects, Acute and Delayed

No information available

4.3 Indication of Immediate Medical Attention and Special Treatment

No information available

SECTION 5: Firefighting Measures

5.1 Extinguishing Media

Not considered to be a fire or explosion hazard. Use any means suitable for extinguishing surrounding fire.

5.2 Specific Hazards Associated with this Chemical

No information available

5.3 Special Equipment/Precautions for Firefighters

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

5.4 Other Information

No information available

SECTION 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Use personal protective equipment as defined in section 8. Avoid breathing vapors, mist or gas. Ensure adequate ventilation in the event of a leak or spill Isolate hazard area and keep unprotected personnel from entering.

6.2 Environmental Precautions

Do not let product enter drains.

6.3 Methods and Materials for Containment and Cleaning Up

Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with inert material (i.e. vermiculite, dry sand, earth) and place in a chemical waste container. Do not use combustible materials such as saw dust. Do not flush to sewer.

6.4 Other Information

No information available

SECTION 7: Handling and Storage

7.1 Precautions for Safe Handling

Avoid contact with skin and eyes.

7.2 Conditions for Storage Including any Incompatibilities

Store in a cool, dry, well-ventilated area away from incompatible and combustible substances. Keep containers tightly closed.

7.3 Other Information

No information available

SECTION 8: Exposure Controls, Personal Protection

8.1 Control Parameters

Chemical does not contain any substances with occupational exposure limits.

8.2 Engineering Controls

Use adequate ventilation to keep airborne concentrations low.

8.3 Personal Protective Measures

Eye

Safety glasses with side-shields conforming to ANSI- Z87 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Respiratory

No respiratory protection required under normal conditions of use.

Hand

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wear impervious gloves: Nitrile rubber with layer thickness 0.11 mm. Wash and dry hands.

Skin and body

Wear impervious protective clothing, including shoes, gloves, apron, coveralls, lab coat, as appropriate to prevent skin contact.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 9- Physical and Chemical Properties

Appearance	: Clear Solution
Odor	: Odorless
Odor Threshold	: No information available
pH	: 4.5-7.0 @ 25°C
Vapor Pressure	: No information available
Vapor Density	: No information available
Viscosity	: No information available
Specific Gravity/Density	: 1.345g/cm ³
Melting Point:	: No information available
Upper/Lower Flammability or Explosive Limits	: No information available
Boiling Point	: 100°C
Decomposition Temperature	: No information available
Flash Point	: No information available
Solubility	: Soluble
Evaporation Rate	: No information available
Flammability (liquid)	: Not considered a fire hazard
Partition coefficient	: No information available
Auto-ignition Temperature	: No information available

SECTION 10: Stability and Reactivity

10.1 Reactivity

No information available

10.2 Chemical Stability

Stable under normal conditions and use

10.3 Conditions to Avoid

Incompatible materials

10.4 Incompatibilities with Other Materials

Strong oxidizing agents.

10.5 Hazardous Decomposition Products

Burning may produce Hydrogen chloride, nitrogen oxides, carbon monoxide, and carbon dioxide.

SECTION 11: Toxicological Information

11.1 Toxicological Effects

LD50 Oral	: rat - 475 mg/kg. To the best of our knowledge the toxicological properties of this product have not been thoroughly investigated. <i>Not listed as a carcinogen by NTP, IARC, or OSHA</i>
Potential Health Effects	
Eyes	: May cause eye irritation. Inflammation is characterized by redness, watering, and itching.
Skin	: May cause skin irritation. Skin inflammation is characterized by itching, scaling, reddening or occasionally blistering.
Ingestion	: Harmful if swallowed. May cause irritation of the digestive tract.
Inhalation	: Irritating to the respiratory tract.
Specific Target Organ Toxicity	
Single Exposure	: No information available
Repeated Exposure	: No information available
Carcinogenicity	: No information available
Teratogenicity	: No information available
Reproductive Effects	: No information available
Mutagenicity	: No information available

SECTION 12: Ecological Information

12.1 Ecotoxicity

Toxicity to fish LC50 - Leuciscus idus (Golden orfe) - 1,759 mg/l

12.2 Persistence and Degradability

Not readily biodegradable.

12.3 Bioaccumulative Potential

No information available

12.4 Mobility in Soil

No information available

12.5 Other Adverse Effects

No information available

SECTION 13: Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14: Transport Information

Regulations	US DOT	ADR	IATA	IMDG
Shipping Name	Not Dangerous Goods.	Not Dangerous Goods.	Not Dangerous Goods.	Not Dangerous Goods.
Hazard Class				
UN Number				
Packing Group				

SECTION 15: Regulatory Information

15.1 EHS Chemical Specific Regulations

TSCA : CAS# 50-01-1 is listed on the 8(b) TSCA inventory.
Section 12b : None of the chemicals are listed under TSCA Section 12b.

SARA:

SARA 302 Components : This chemical is not subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components : This material does not exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards : Acute Health Hazard, Chronic Health Hazard

STATE SPECIFIC:

California Prop. 65 Components : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Additional Information

16.1 Hazard Ratings

HMIS Classification	
Health Hazard	1
Flammability	0
Physical Hazards	0

NFPA Rating	
Health hazard	1
Fire	0
Reactivity Hazard	0

The information conveyed in this Safety Data Sheet is only a representation of what BioSpectra has found to be accurate based on the current information that is available in regards to this compound. BioSpectra makes no warranty, expressed or implied, with respect to such information, and therefore assumes no liability resulting from product usage. It is strongly recommended that users of this product perform their own investigations to determine the accuracy and suitability of the information for their specific purposes. In no way will BioSpectra assume liability for any claims, losses, damages to any third party, any lost profits or any special, indirect, incidental, consequential or exemplary damages that may arise, even if BioSpectra has been advised of the possibility of such damages.